



SEQUENCE LISTING

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Senaldi, Giorgio

<120> Novel Polypeptides Involved in Immune Response

<130> 6843.0050-03

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<141> 2000-11-28

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<150> US 09/264,527

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<150> US 09/244,448

<151> 1999-02-03

<160> 39

<170> PatentIn version 3.1

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ctt tta aca gga gaa atc aat ggc tcg gcc gat cat agg atg ttt tca 96
Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
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ttt cac aat gga ggt gta cag att tct tgt aaa tac cct gag act gtc 144
Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
35 40 45

cag cag tta aaa atg cga ttg ttc aga gag aga gaa gtc ctc tgc gaa 192
Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
50 55 60

ctc acc aag acc aag gga agc gga aat gcg gtg tcc atc aag aat cca 240
Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
65 70 75 80

atg ctc tgt cta tat cat ctg tca aac aac agc gtc tct ttt ttc cta 288
Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

aac aac cca gac agc tcc cag gga agc tat tac ttc tgc agc ctg tcc 336
Page 1

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Leu	His 130	Ile	Tyr	Glu	Ser	Gln 135	Leu	Cys	Cys	Gln	Leu 140	Lys	Leu	Trp	Leu		
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Pro	Val	Gly	Cys	Ala	Ala 150	Phe	Val	Val	Val	Leu 155	Leu	Phe	Gly	Cys	Ile 160		
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Leu	Ile	Ile	Trp	Phe 165	Ser	Lys	Lys	Lys	Tyr 170	Gly	Ser	Ser	Val	His 175	Asp		
cct	aat	agt	gaa	tac	atg	ttc	atg	gcg	gca	gtc	aac	aca	aac	aaa	aag		576
Pro	Asn	Ser	Glu 180	Tyr	Met	Phe	Met	Ala 185	Ala	Val	Asn	Thr	Asn 190	Lys	Lys		
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Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
35 40 45

Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
65 70 75 80

Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr

115

120

125

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
 130 135 140

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
 145 150 155 160

Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
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 35 40 45

Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
 50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
 65 70 75 80

Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
 85 90 95

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
 100 105 110

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
 115 120 125

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
 130 135 140

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
145 150 155 160

Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
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Asp Ser Asn Glu Val Ser Leu Ser Cys Arg Tyr Ser Tyr Asn Leu Leu
35 40 45

Ala Lys Glu Phe Arg Ala Ser Leu Tyr Lys Gly Val Asn Ser Asp Val
50 55 60

Glu Val Cys Val Gly Asn Gly Asn Phe Thr Tyr Gln Pro Gln Phe Arg
65 70 75 80

Ser Asn Ala Glu Phe Asn Cys Asp Gly Asp Phe Asp Asn Glu Thr Val
85 90 95

Thr Phe Arg Leu Trp Asn Leu His Val Asn His Thr Asp Ile Tyr Phe
100 105 110

Cys Lys Ile Glu Phe Met Tyr Pro Pro Pro Tyr Leu Asp Asn Glu Arg
115 120 125

Ser Asn Gly Thr Ile Ile His Ile Lys Glu Lys His Leu Cys His Thr
130 135 140

Gln Ser Ser Pro Lys Leu Phe Trp Ala Leu Val Val Val Ala Gly Val
145 150 155 160

Leu Phe Cys Tyr Gly Leu Leu Val Thr Val Ala Leu Cys Val Ile Trp
 165 170 175

Thr Asn Ser Arg Arg Asn Arg Leu Leu Gln Val Thr Thr Met Asn Met
 180 185 190

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gtt tgg aag aag ctc cat gtt tct agc ggg ttc ttt tct ggt ctt ggt 96
 Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
 20 25 30

ctg ttc ttg ctg ctg ttg agc agc ctc tgt gct gcc tct gca gag act 144
 Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
 35 40 45

gaa gtc ggt gca atg gtg ggc agc aat gtg gtg ctc agc tgc att gac 192
 Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
 Page 5

D9

50

55

60

ccc cac aga cgc cat ttc aac ttg agt ggt ctg tat gtc tat tgg caa 240
Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

atc gaa aac cca gaa gtt tcg gtg act tac tac ctg cct tac aag tct 288
Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

cca ggg atc aat gtg gac agt tcc tac aag aac agg ggc cat ctg tcc 336
Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

ctg gac tcc atg aag cag ggt aac ttc tct ctg tac ctg aag aat gtc 384
Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

acc cct cag gat acc cag gag ttc aca tgc cgg gta ttt atg aat aca 432
Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
130 135 140

gcc aca gag tta gtc aag atc ttg gaa gag gtg gtc agg ctg cgt gtg 480
Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
145 150 155 160

gca gca aac ttc agt aca cct gtc atc agc acc tct gat agc tcc aac 528
Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
165 170 175

ccg ggc cag gaa cgt acc tac acc tgc atg tcc aag aat ggc tac cca 576
Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
180 185 190

gag ccc aac ctg tat tgg atc aac aca acg gac aat agc cta ata gac 624
Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
195 200 205

acg gct ctg cag aat aac act gtc tac ttg aac aag ttg ggc ctg tat 672
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225 230 235 240

ctg tgc tgc gta gag aat gtg gct ctc cac cag aac atc act agc att 768
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245 250 255

agc cag gca gaa agt ttc act gga aat aac aca aag aac cca cag gaa 816
Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
260 265 270

acc cac aat aat gag tta aaa gtc ctt gtc ccc gtc ctt gct gta ctg 864
Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
275 280 285

gcg gca gcg gca ttc gtt tcc ttc atc ata tac aga cgc acg cgt ccc 912
Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
290 295 300

cac cga agc tat aca gga ccc aag act gta cag ctt gaa ctt aca gac 960
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D9

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966

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D⁹ Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
195 200 205

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
225 230 235 240

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
245 250 255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
275 280 285

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
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Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
195 200 205

D9

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
225 230 235 240

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
245 250 255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
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Gln Val Ser Ser Asp Val Asp Glu Gln Leu Ser Lys Ser Val Lys Asp
35 40 45

Lys Val Leu Leu Pro Cys Arg Tyr Asn Ser Pro His Glu Asp Glu Ser
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Glu Asp Arg Ile Tyr Trp Gln Lys His Asp Lys Val Val Leu Ser Val
65 70 75 80

Ile Ala Gly Lys Leu Lys Val Trp Pro Glu Tyr Lys Asn Arg Thr Leu
85 90 95

Tyr Asp Asn Thr Thr Tyr Ser Leu Ile Ile Leu Gly Leu Val Leu Ser
100 105 110

Asp Arg Gly Thr Tyr Ser Cys Val Val Gln Lys Lys Glu Arg Gly Thr
115 120 125

Tyr Glu Val Lys His Leu Ala Leu Val Lys Leu Ser Ile Lys Ala Asp
130 135 140

Phe Ser Thr Pro Asn Ile Thr Glu Ser Gly Asn Pro Ser Ala Asp Thr
145 150 155 160

Lys Arg Ile Thr Cys Phe Ala Ser Gly Gly Phe Pro Lys Pro Arg Phe
165 170 175

Ser Trp Leu Glu Asn Gly Arg Glu Leu Pro Gly Ile Asn Thr Thr Ile
180 185 190

Ser Gln Asp Pro Glu Ser Glu Leu Tyr Thr Ile Ser Ser Gln Leu Asp
195 200 205

Phe Asn Thr Thr Arg Asn His Thr Ile Lys Cys Leu Ile Lys Tyr Gly
210 215 220

Asp Ala His Val Ser Glu Asp Phe Thr Trp Glu Lys Pro Pro Glu Asp
225 230 235 240

Pro Pro Asp Ser Lys Asn Thr Leu Val Leu Phe Gly Ala Gly Phe Gly
245 250 255

Ala Val Ile Thr Val Val Val Ile Val Val Ile Ile Lys Cys Phe Cys
260 265 270

Lys His Arg Ser Cys Phe Arg Arg Asn Glu Ala Ser Arg Glu Thr Asn
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Phe Leu
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Cys Val Val Leu Ala Phe Ser Thr Pro Ile Ser Arg Thr Cys Gly Pro
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Pro Glu Thr
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48

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gat gtt tac gta tat tgg caa acc agt gag tcg aaa acc gtg gtg acc	192
Asp Val Tyr 50 Tyr Trp 55 Gln Thr Ser Glu Ser 60 Lys Thr Val Val Thr	
tac cac atc cca cag aac agc tcc ttg gaa aac gtg gac agc cgc tac	240
Tyr His Ile Pro 65 Gln Asn 70 Ser Ser Leu Glu 75 Asn Val Asp Ser Arg Tyr 80	
cgg aac cga gcc ctg atg tca ccg gcc ggc atg ctg cgg ggc gac ttc	288
Arg Asn Arg Ala 85 Leu Met Ser Pro Ala 90 Gly Met Leu Arg Gly Asp 95 Phe	
tcc ctg cgc ttg ttc aac gtc acc ccc cag gac gag cag aag ttt cac	336
Ser Leu Arg 100 Leu Phe Asn Val Thr 105 Pro Gln Asp Glu Gln 110 Lys Phe His	
tgc ctg gtg ttg agc caa tcc ctg gga ttc cag gag gtt ttg agc gtt	384
Cys Leu Val 115 Leu Ser Gln Ser Leu 120 Gly Phe Gln Glu 125 Val Leu Ser Val	
D9 gag gtt aca ctg cat gtg gca gca aac ttc agc gtg ccc gtc gtc agc	432
Glu Val Thr 130 Leu His Val 135 Ala Ala Asn Phe Ser Val 140 Pro Val Val Ser	
gcc ccc cac agc ccc tcc cag gat gag ctc acc ttc acg tgt aca tcc	480
Ala Pro His Ser Pro 150 Ser Gln Asp Glu Leu Thr 155 Phe Thr Cys Thr Ser 160	
ata aac ggc tac ccc agg ccc aac gtg tac tgg atc aat aag acg gac	528
Ile Asn Gly Tyr 165 Pro Arg Pro Asn Val 170 Tyr Trp Ile Asn Lys Thr 175 Asp	
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Asn Ser Leu 180 Leu Asp Gln Ala Leu 185 Gln Asn Asp Thr Val 190 Phe Leu Asn	
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Met Arg Gly 195 Leu Tyr Asp Val 200 Val Ser Val Leu Arg 205 Ile Ala Arg Thr	
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Pro Ser Val Asn Ile Gly Cys 215 Cys Ile Glu Asn Val 220 Leu Leu Gln Gln	
aac ctg act gtc ggc agc cag aca gga aat gac atc gga gag aga gac	720
Asn Leu Thr Val Gly Ser 230 Gln Thr Gly Asn Asp 235 Ile Gly Glu Arg Asp 240	
aag atc aca gag aat cca gtc agt acc ggc gag aaa aac gcg gcc acg	768
Lys Ile Thr 245 Glu Asn Pro Val Ser Thr 250 Gly Glu Lys Asn Ala Ala Thr 255	
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Trp Ser Ile 260 Leu Ala Val Leu Cys 265 Leu Val Val Val 270 Ala Val Ala	

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 Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
 275 280 285

864

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 <213> Homo sapiens

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 20 25 30

Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
 35 40 45

Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
 50 55 60

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
 65 70 75 80

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
 85 90 95

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
 100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
 115 120 125

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
 130 135 140

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
 145 150 155 160

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
 165 170 175

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
 180 185 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
 195 200 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

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275 280 285

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Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn Asp Val Tyr Val Tyr
20 25 30

Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr Tyr His Ile Pro Gln
35 40 45

Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr Arg Asn Arg Ala Leu
50 55 60

Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe Ser Leu Arg Leu Phe
65 70 75 80

Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His Cys Leu Val Leu Ser
85 90 95

Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val Glu Val Thr Leu His
100 105 110

Val Ala Ala Asn Phe Ser Val Pro Val Val Ser Ala Pro His Ser Pro
115 120 125

Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser Ile Asn Gly Tyr Pro
130 135 140

Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp Asn Ser Leu Leu Asp
145 150 155 160

Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn Met Arg Gly Leu Tyr
165 170 175

Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr Pro Ser Val Asn Ile
180 185 190

Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln Asn Leu Thr Val Gly
195 200 205

Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp Lys Ile Thr Glu Asn
210 215 220

Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr Trp Ser Ile Leu Ala
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245 250 255

Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
260 265

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20 25 30

Trp Gln Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr
35 40 45

Lys Ser Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His
50 55 60

Leu Ser Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys
65 70 75 80

Asn Val Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met
85 90 95

Asn Thr Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu
Page 15

100 105 110
 Arg Val Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser
 115 120 125
 Ser Asn Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly
 130 135 140
 Tyr Pro Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu
 145 150 155 160
 Ile Asp Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly
 165 170 175
 Leu Tyr Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly
 180 185 190
 Asp Val Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr
 195 200 205
 Ser Ile Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro
 210 215 220
 Gln Glu Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala
 225 230 235 240
 Val Leu Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr
 245 250 255
 Arg Pro His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu
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 Thr Asp His Ala
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 1 5 10 15

Val Tyr Trp Gln Val Thr Tyr Pro Ser Asn Val Asp Ser Tyr Asn Arg
 20 25 30

Ser Met Gly Phe Ser Leu Leu Asn Val Thr Pro Gln Asp Gln Phe Cys
 35 40 45

Val Leu Val Leu Val Ala Ala Asn Phe Ser Pro Val Ser Ser Glu Thr
 50 55 60

Thr Cys Ser Asn Gly Tyr Pro Pro Asn Tyr Trp Ile Asn Thr Asp Asn
 65 70 75 80

Ser Leu Asp Ala Leu Gln Asn Thr Val Leu Asn Gly Leu Tyr Asp Val
 85 90 95

Ser Leu Arg Thr Cys Cys Glu Asn Val Leu Gln Asn Thr Ser Gln Gly
 100 105 110

Lys Lys Leu Ala Val Leu Val Ile Arg Arg Ser Tyr Gly
 115 120 125

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 <213> Homo sapiens

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 <222> (200)..(1105)
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tctccgcgpg cccaagttct ccgcgccccg aggtctccgc gccccgaggt ctccgcggcc 180

cgaggtctcc gcccgcacc atg cgg ctg ggc agt cct gga ctg ctc ttc ctg 232
 Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu
 1 5 10

ctc ttc agc agc ctt cga gct gat act cag gag aag gaa gtc aga gcg 280
 Leu Phe Ser Ser Leu Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala
 15 20 25

atg gta ggc agc gac gtg gag ctc agc tgc gct tgc cct gaa gga agc 328
 Met Val Gly Ser Asp Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser
 30 35 40

cgt ttt gat tta aat gat gtt tac gta tat tgg caa acc agt gag tcg 376
 Arg Phe Asp Leu Asn Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser
 45 50 55

aaa acc gtg gtg acc tac cac atc cca cag aac agc tcc ttg gaa aac 424
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Lys 60	Thr	Val	Val	Thr	Tyr 65	His	Ile	Pro	Gln	Asn 70	Ser	Ser	Leu	Glu	Asn 75	
gtg Val	gac Asp	agc Ser	cgc Arg	tac Tyr 80	cgg Arg	aac Asn	cga Arg	gcc Ala	ctg Leu 85	atg Met	tca Ser	ccg Pro	gcc Ala	ggc Gly 90	atg Met	472
ctg Leu	cgg Arg	ggc Gly	gac Asp 95	ttc Phe	tcc Ser	ctg Leu	cgc Arg	ttg Leu 100	ttc Phe	aac Asn	gtc Val	acc Thr	ccc Pro 105	cag Gln	gac Asp	520
gag Glu	cag Gln	aag Lys 110	ttt Phe	cac His	tgc Cys	ctg Leu	gtg Val 115	ttg Leu	agc Ser	caa Gln	tcc Ser	ctg Leu 120	gga Gly	ttc Phe	cag Gln	568
gag Glu	gtt Val 125	ttg Leu	agc Ser	gtt Val	gag Glu	gtt Val 130	aca Thr	ctg Leu	cat His	gtg Val	gca Ala 135	gca Ala	aac Asn	ttc Phe	agc Ser	616
gtg Val 140	ccc Pro	gtc Val	gtc Val	agc Ser	gcc Ala 145	ccc Pro	cac His	agc Ser	ccc Pro	tcc Ser 150	cag Gln	gat Asp	gag Glu	ctc Leu	acc Thr 155	664
ttc Phe	acg Thr	tgt Cys	aca Thr	tcc Ser 160	ata Ile	aac Asn	ggc Gly	tac Tyr	ccc Pro 165	agg Arg	ccc Pro	aac Asn	gtg Val	tac Tyr 170	tgg Trp	712
atc Ile	aat Asn	aag Lys	acg Thr 175	gac Asp	aac Asn	agc Ser	ctg Leu	ctg Leu 180	gac Asp	cag Gln	gct Ala	ctg Leu	cag Gln 185	aat Asn	gac Asp	760
acc Thr	gtc Val	ttc Phe 190	ttg Leu	aac Asn	atg Met	cgg Arg	ggc Gly 195	ttg Leu	tat Tyr	gac Asp	gtg Val	gtc Val 200	agc Ser	gtg Val	ctg Leu	808
agg Arg	atc Ile 205	gca Ala	cgg Arg	acc Thr	ccc Pro	agc Ser 210	gtg Val	aac Asn	att Ile	ggc Gly	tgc Cys 215	tgc Cys	ata Ile	gag Glu	aac Asn	856
gtg Val 220	ctt Leu	ctg Leu	cag Gln	cag Gln	aac Asn 225	ctg Leu	act Thr	gtc Val	ggc Gly	agc Ser 230	cag Gln	aca Thr	gga Gly	aat Asn	gac Asp 235	904
atc Ile	gga Gly	gag Glu	aga Arg	gac Asp 240	aag Lys	atc Ile	aca Thr	gag Glu	aat Asn 245	cca Pro	gtc Val	agt Ser	acc Thr	ggc Gly 250	gag Glu	952
aaa Lys	aac Asn	gcg Ala	gcc Ala 255	acg Thr	tgg Trp	agc Ser	atc Ile	ctg Leu 260	gct Ala	gtc Val	ctg Leu	tgc Cys	ctg Leu 265	ctt Leu	gtg Val	1000
gtc Val	gtg Val	gcg Ala 270	gtg Val	gcc Ala	ata Ile	ggc Gly	tgg Trp 275	gtg Val	tgc Cys	agg Arg	gac Asp	cga Arg 280	tgc Cys	ctc Leu	caa Gln	1048
cac His	agc Ser 285	tat Tyr	gca Ala	ggt Gly	gcc Ala	tgg Trp 290	gct Ala	gtg Val	agt Ser	ccg Pro	gag Glu 295	aca Thr	gag Glu	ctc Leu	act Thr	1096
ggc Gly 300	cac His	gtt Val	tgaccg	gagc	tcaccg	ccca	gagcgt	ggac	agggtt	ccg						1145
tgagac	gccca	ccgtgag	agg	ccaggt	ggca	gcttgag	cat	ggactccc	cag	actgcag	ggg					1205

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 tggctgtgat cctggaatga ggccctttc 1294

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 <213> Homo sapiens

<400> 17

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
 1 5 10 15

Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
 20 25 30

Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
 35 40 45

Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
 50 55 60

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
 65 70 75 80

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
 85 90 95

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
 100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
 115 120 125

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
 130 135 140

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
 145 150 155 160

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
 165 170 175

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
 180 185 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
 195 200 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285

Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Gly His Val
290 295 300

<210> 18
<211> 302
<212> PRT
<213> Homo sapiens
<400> 18

Met Arg Leu Gly Ser Pro Gly Leu Leu Phe Leu Leu Phe Ser Ser Leu
1 5 10 15

Arg Ala Asp Thr Gln Glu Lys Glu Val Arg Ala Met Val Gly Ser Asp
20 25 30

Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
35 40 45

Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
50 55 60

Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
65 70 75 80

Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
85 90 95

Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
100 105 110

Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
115 120 125

Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
130 135 140

Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
145 150 155 160

Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
165 170 175

Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
180 185 190

Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
195 200 205

Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220

Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240

Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255

Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Val Ala Val Ala
260 265 270

Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285

Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Gly His Val
290 295 300

<210> 19
<211> 322
<212> PRT
<213> Mus musculus

<400> 19

Met Gln Leu Lys Cys Pro Cys Phe Val Ser Leu Gly Thr Arg Gln Pro
1 5 10 15

Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
20 25 30

Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
35 40 45

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
Page 21

50

55

60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr
130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val
145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn
165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro
180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp
195 200 205

Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr
210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val
225 230 235 240

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile
245 250 255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu
260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu
275 280 285

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro
290 295 300

His Arg Ser Tyr Thr Gly Pro Lys Thr Val Gln Leu Glu Leu Thr Asp
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D9

305

310

315

320

His Ala

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 <212> PRT
 <213> Artificial sequence

<220>
 <223> Synthetic

<400> 20

Met Leu Pro Gly Leu Leu Phe Leu Leu Ser Ser Leu Ala Glu Glu Val
 1 5 10 15

Ala Met Val Gly Ser Val Leu Ser Cys Pro Phe Leu Tyr Val Tyr Trp
 20 25 30

Gln Val Thr Tyr Pro Ser Asn Val Asp Ser Tyr Asn Arg Ser Met Gly
 35 40 45

Phe Ser Leu Leu Asn Val Thr Pro Gln Asp Gln Phe Cys Val Leu Val
 50 55 60

Leu Val Ala Ala Asn Phe Ser Pro Val Ser Ser Glu Thr Thr Cys Ser
 65 70 75 80

Asn Gly Tyr Pro Pro Asn Tyr Trp Ile Asn Thr Asp Asn Ser Leu Asp
 85 90 95

Ala Leu Gln Asn Thr Val Leu Asn Gly Leu Tyr Asp Val Ser Leu Arg
 100 105 110

Thr Cys Cys Glu Asn Val Leu Gln Asn Thr Ser Gln Gly Lys Lys Leu
 115 120 125

Ala Val Leu Val Ile Arg Arg Ser Tyr Gly Val Glu Leu Thr His
 130 135 140

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 <212> DNA
 <213> Homo sapiens

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<221> CDS
 <222> (166)..(762)
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 tccgtgaaca ctgaacgcga ggactgttaa ctgtttctgg caaac atg aag tca ggc 177
 Met Lys Ser Gly
 1
 ctc tgg tat ttc ttt ctc ttc tgc ttg cgc att aaa gtt tta aca gga 225
 Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys Val Leu Thr Gly
 5 10 15 20
 gaa atc aat ggt tct gcc aat tat gag atg ttt ata ttt cac aac gga 273
 Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile Phe His Asn Gly
 25 30 35
 ggt gta caa att tta tgc aaa tat cct gac att gtc cag caa ttt aaa 321
 Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val Gln Gln Phe Lys
 40 45 50
 atg cag ttg ctg aaa ggg ggg caa ata ctc tgc gat ctc act aag aca 369
 Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp Leu Thr Lys Thr
 55 60 65
 aaa gga agt gga aac aca gtg tcc att aag agt ctg aaa ttc tgc cat 417
 Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu Lys Phe Cys His
 70 75 80
 tct cag tta tcc aac aac agt gtc tct ttt ttt cta tac aac ttg gac 465
 Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu Tyr Asn Leu Asp
 85 90 95 100
 cat tct cat gcc aac tat tac ttc tgc aac cta tca att ttt gat cct 513
 His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser Ile Phe Asp Pro
 105 110 115
 cct cct ttt aaa gta act ctt aca gga gga tat ttg cat att tat gaa 561
 Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu His Ile Tyr Glu
 120 125 130
 tca caa ctt tgt tgc cag ctg aag ttc tgg tta ccc ata gga tgt gca 609
 Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro Ile Gly Cys Ala
 135 140 145
 gcc ttt gtt gta gtc tgc att ttg gga tgc ata ctt att tgt tgg ctt 657
 Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu Ile Cys Trp Leu
 150 155 160
 aca aaa aag aag tat tca tcc agt gtg cac gac cct aac ggt gaa tac 705
 Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro Asn Gly Glu Tyr
 165 170 175 180
 atg ttc atg aga gca gtg aac aca gcc aaa aaa tct aga ctc aca gat 753
 Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser Arg Leu Thr Asp
 185 190 195
 gtg acc cta taatatggaa ctctggcacc caggcatgaa gcacgttggc 802
 Val Thr Leu

cagttttcct caacttgaag tgcaagattc tcttatttcc gggaccacgg agagtctgac 862
 ttaactacat acatcttctg ctggtgtttt gttcaatctg gaagaatgac tgtatcagtc 922
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 accaagactt tagatgcttt cttgtgcc 1370

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 <211> 199
 <212> PRT
 <213> Homo sapiens
 <400> 22

Met Lys Ser Gly Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys
 1 5 10 15

Val Leu Thr Gly Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile
 20 25 30

Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val
 35 40 45

Gln Gln Phe Lys Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp
 50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu
 65 70 75 80

Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
 85 90 95

Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser
 100 105 110

Ile Phe Asp Pro Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu
 115 120 125

His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro
 130 135 140

Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu
145 150 155 160

Ile Cys Trp Leu Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro
165 170 175

Asn Gly Glu Tyr Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser
180 185 190

Arg Leu Thr Asp Val Thr Leu
195

<210> 23
<211> 199
<212> PRT
<213> Homo sapiens

<400> 23

Met Lys Ser Gly Leu Trp Tyr Phe Phe Leu Phe Cys Leu Arg Ile Lys
1 5 10 15

Val Leu Thr Gly Glu Ile Asn Gly Ser Ala Asn Tyr Glu Met Phe Ile
20 25 30

Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val
35 40 45

Gln Gln Phe Lys Met Gln Leu Leu Lys Gly Gly Gln Ile Leu Cys Asp
50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Ser Leu
65 70 75 80

Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Lys Val Thr Leu Thr Gly Gly Tyr Leu
115 120 125

His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Phe Trp Leu Pro
130 135 140

Ile Gly Cys Ala Ala Phe Val Val Val Cys Ile Leu Gly Cys Ile Leu
145 150 155 160

Ile Cys Trp Leu Thr Lys Lys Lys Tyr Ser Ser Ser Val His Asp Pro
165 170 175

Asn Gly Glu Tyr Met Phe Met Arg Ala Val Asn Thr Ala Lys Lys Ser
180 185 190

Arg Leu Thr Asp Val Thr Leu
195

<210> 24
<211> 200
<212> PRT
<213> Mus musculus

<400> 24

Met Lys Pro Tyr Phe Cys Arg Val Phe Val Phe Cys Phe Leu Ile Arg
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Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
20 25 30

Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
35 40 45

D9 Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
50 55 60

Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
65 70 75 80

Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85 90 95

Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser
100 105 110

Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr
115 120 125

Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
130 135 140

Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
145 150 155 160

Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
165 170 175

Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
Page 27

180

185

190

Ser Arg Leu Ala Gly Val Thr Ser
195 200

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<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oglionucleotide

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accatgcggc tgggcagtc tgga 24

<210> 26
<211> 23
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<220>
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<400> 26
tggtgaccta ccacatcca cag 23

<210> 27
<211> 23
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<220>
<223> Synthetic oglionucleotide

<400> 27
tccgatgtca tttcctgtct ggc 23

<210> 28
<211> 24
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oglionucleotide

<400> 28
gctctgtctc cggactcaca gccc 24

<210> 29
<211> 28
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oglionucleotide

<400> 29

gtggcagcaa acttcagcgt gcccgtcg

28

<210> 30

<211> 28

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oglionucleotide

<400> 30

cccaacgtgt actggatcaa taagacgg

28

<210> 31

<211> 28

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oglionucleotide

<400> 31

gcgtgctgag gatcgacgg acccccag

28

<210> 32

<211> 21

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oglionucleotide

<400> 32

gcctctagaa agagctggga c

21

<210> 33

<211> 21

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oglionucleotide

<400> 33

cgccgtgttc catttatgag c

21

<210> 34

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> Synthetic oglionucleotide

<400> 34

gcatatttat gaatccca

18

<210> 35

<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic oglionucleotide

<400> 35
actattaggg tcatgcac

18

<210> 36
<211> 6
<212> PRT
<213> Artificial

<220>
<223> Synthetic polypeptide

<400> 36
Met Tyr Pro Pro Pro Tyr
1 5

D9

<210> 37
<211> 6
<212> PRT
<213> Artificial

<220>
<223> Synthetic polypeptide

<400> 37
Phe Asp Pro Pro Pro Phe
1 5

<210> 38
<211> 23
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 38
gagactcatg ctgtggtttc agg

23

<210> 39
<211> 22
<212> DNA
<213> Artificial

<220>
<223> PCR primer

<400> 39
ttcgccaatg acaagacgct gg

22